

USSN 09/337,584

In the Claims

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

42. (Currently Amended) A method for redirecting a subject's immune response from a Th2 to a Th1 comprising the step of administering to the subject an immunostimulatory nucleic acid of 8 - 100 nucleotides in length, having the following formula:



wherein C is unmethylated, wherein X_1 , X_2 , X_3 , and X_4 are nucleotides, ~~wherein the nucleic acid has between only 8 and 100 nucleotides,~~ wherein the 5' $X_1 X_2 C G X_3 X_4$ 3' sequence is a non-palindromic sequence.

43. (Canceled Herewith).

45. (Previously Presented) The method of claim 42, wherein the nucleic acid includes a phosphate backbone modification.

46. (Previously Presented) The method of claim 45, wherein the nucleic acid includes the phosphate backbone modification on the 3' side of the nucleic acid.

47. (Previously Presented) The method of claim 45, wherein the phosphate backbone modification is selected from the group consisting of a phosphorothioate and a phosphorodithioate modification.

48. (Previously Presented) The method of claim 42, wherein $X_1 X_2$ are nucleotides selected from the group consisting of: GpT, GpG, GpA, ApA, ApT, ApG, CpT, CpA, CpG, TpA, TpT,

USSN 09/337,584

and TpG; and X_3X_4 are nucleotides selected from the group consisting of: TpT, CpT, ApT, TpG, ApG, CpG, TpC, ApC, CpC, TpA, ApA, and CpA.

49. (Previously Presented) The method of claim 42, wherein X_1X_2 are GpA and X_3X_4 are TpT.

50. (Previously Presented) The method of claim 42, wherein X_1 and X_2 are purines and X_3 and X_4 are pyrimidines.

51. (Previously Presented) The method of claim 42, wherein X_1X_2 are GpA and X_3 and X_4 are pyrimidines.

52. (Previously Presented) The method of claim 42, wherein the immunostimulatory nucleic acid is 8 to 40 nucleotides in length.

53. (Previously Presented) The method of claim 42, wherein the immunostimulatory nucleic acid, has a sequence including at least the following formula:



wherein X_1 , X_2 , X_3 , and X_4 are nucleotides and N is a nucleic acid sequence composed of from about 2-25 nucleotides.

57. (Previously Presented) The method of claim 42, wherein the nucleic acid is administered by a route selected from the group consisting of oral, transdermal, and subcutaneous.

58. (Previously Presented) The method of claim 42, wherein the nucleic acid is delivered in a formulation selected from the group consisting of a nucleic acid delivery complex, a liposome, a virosome, and a nanoparticle.

USSN 09/337,584

59. (New) A method for redirecting a subject's immune response from a Th2 to a Th1 comprising the step of administering to the subject an immunostimulatory nucleic acid of 8 - 100 nucleotides in length, having the following formula:



wherein C is unmethylated, wherein X_1 , X_2 , X_3 , and X_4 are nucleotides, wherein the nucleic acid includes a phosphate backbone modification.

60. (New) The method of claim 59, wherein the phosphate backbone modification is a phosphorothioate modification.